

Claims

1. Ligament-tensioning device (1) for preparing for the
implantation of a joint implant, with a base body (5),
5 having a first claw (6) with a distal bearing surface (7)
which rests on a first bone, and a second claw (13) which
rests, with a proximal bearing surface (10), against a
second bone, the second claw (13) being displaceable
parallel to the first claw (6), characterised in that a
10 cutting jig (2) can be placed onto mounts (4) of the base
body (5) of the ligament-tensioning device (1).
2. Ligament-tensioning device according to Claim 1,
characterised in that the cutting jig (2) has projections
15 (30) of U-shaped design with slots (31).
3. Ligament-tensioning device according to Claim 2,
characterised in that the projections (30) of the cutting
jig (2) can be brought into engagement with the mounts (4).
- 20 4. Ligament-tensioning device according to one of Claims
1 to 3, characterised in that the cutting jig (2) can be
fixed to the mounts by means of a locking element (3).
- 25 5. Ligament-tensioning device according to one of Claims
1 to 4, characterised in that the mounts (4) comprise
catches (32).
6. Ligament-tensioning device according to Claim 5,
30 characterised in that the catches (32) are equidistant.

7. Ligament-tensioning device according to Claim 5 or 6, characterised in that the cutting jig (2) is displaceable on the mounts (4) in a catching manner.
- 5 8. Ligament-tensioning device according to one of Claims 1 to 7, characterised in that the first claw (6) and the second claw (13) are displaceable parallel to one another by means of a parallel-displacement device (12).
- 10 9. Ligament-tensioning device according to Claim 8, characterised in that a first scale (33) is provided on a component (35) connecting the second claw (13) to the parallel-displacement device (12).
- 15 10. Ligament-tensioning device according to Claim 8, characterised in that a second scale (34) is provided on the base body (5).
11. Ligament-tensioning device according to Claim 10, characterised in that the scales (33; 34) can be brought into coincidence so that the height of an implant to be inserted into the joint to be treated can be preset.
- 20 12. Ligament-tensioning device according to one of Claims 1 to 11, characterised in that the cutting jig (2) has a cylindrical guide (36).
- 25 13. Ligament-tensioning device according to Claim 12, characterised in that an aligning jig (48) can be introduced into the cylindrical guide (36).
- 30

14. Ligament-tensioning device according to Claim 13, characterised in that the aligning jig (48) can be fixed to the second bone by means of a bone nail (51).

5 15. Ligament-tensioning device according to one of Claims 1 to 14, characterised in that the cutting jig (2) has a saw guide (37).

16. Ligament-tensioning device according to one of Claims
10 1 to 15, characterised in that a drilling jig (53) can be fitted onto the ligament-tensioning device (1).

17. Ligament-tensioning device according to Claim 16,
characterised in that the drilling jig (53) can be placed
15 onto the mounts (4) of the base body (5).

18. Ligament-tensioning device according to one of Claims
1 to 17, characterised in that the ligament-tensioning
device (1) is designed as a bilateral ligament-tensioning
20 device (1).

19. Ligament-tensioning device according to Claim 18,
characterised in that the ligament-tensioning device (1)
has a force indicator (25).

25

20. Procedure for preparing a joint for the implantation
of a joint implant by means of a ligament-tensioning device
(1) with cutting jig (2), the ligament-tensioning device
(1) comprising a base body (5), having a first claw (6)
30 with a distal bearing surface (7) which rests on a first
bone, and a second claw (13) which rests, with a proximal
bearing surface (10), against a second bone, the second
claw (13) being displaceable parallel to the first claw

(6), and the cutting jig (2) being able to be placed onto mounts (4) of the base body (5) of the ligament-tensioning device (1), with the following procedure steps:

- carrying out a distal femur osteotomy while
5 simultaneously tensioning the ligaments by means of the ligament-tensioning device (1),
- carrying out a dorsal femur osteotomy while simultaneously tensioning the ligaments by means of the ligament-tensioning device (1), and
- 10 - carrying out femoral oblique cuts while simultaneously tensioning the ligaments by means of the ligament-tensioning device (1).

21. Procedure according to Claim 20, characterised in that
15 the joint implant is a knee joint implant which is implanted into the tibia (40) and the femur (38).

22. Procedure according to Claim 20 or 21, characterised in that the first procedure step comprises the following
20 substeps:

- premounting the cutting jig (2) on the ligament-tensioning device (1),
- setting the desired thickness of the implant,
- introducing the ligament-tensioning device (1) into
25 the knee joint gap (43),
- spreading the ligament-tensioning device (1) with a predetermined force,
- introducing a feeler gauge (45) into a saw guide (37) of the cutting jig (2),
- 30 - checking the distal femur cutting path,
- carrying out the distal femur osteotomy by means of a saw (47) passed through the saw guide (37) of the cutting jig (2),

- removing the ligament-tensioning device (1) from the knee joint gap (43),
 - demounting the cutting jig (2),
 - reintroducing the ligament-tensioning device (1) into the knee joint gap (43), and
 - checking the width of the knee joint gap (43) by means of scales (33, 34) present on the ligament-tensioning device (1).
- 10 23. Procedure according to one of Claims 20 to 22, characterised in that the second procedure step comprises the following substeps:
- flexing the leg,
 - premounting the cutting jig (2) on the ligament-tensioning device (1),
 - introducing the ligament-tensioning device (1) into the knee joint gap (43),
 - spreading the ligament-tensioning device (1) with a predetermined force,
 - pushing the aligning jig (48) for the dorsal femur cut into a cylindrical guide (49) of the cutting jig (2),
 - displacing the aligning jig (48) up against the distal femur surface (50),
 - adjusting the lower leg until the aligning jig (48) rests evenly against the distal femur surface (50),
 - fixing the aligning jig (48) to the distal femur surface (50) by means of a bone nail (51),
 - dorsal femur osteotomy,
 - removing the bone nail (51),
 - removing the ligament-tensioning device (1) from the knee joint gap (43),
 - demounting the cutting jig (2),
 - removing the dorsal osteophytes,

- reintroducing the ligament-tensioning device (1) into the knee joint gap (43), and
- checking the width of the knee joint gap (43) by means of scales (33, 34) present on the ligament-tensioning device (1).

24. Procedure according to one of Claims 20 to 23, characterised in that the third procedure step comprises the following substeps:

- 10 - mounting a drilling jig (53) for an oblique-cutting jig (57) as far as it will go on the ligament-tensioning device (1),
- introducing the ligament-tensioning device (1) into the knee joint gap (43),
- 15 - pushing two drilling sleeves (54) through the drilling jig (53) up to the distal femur surface (50),
- spreading the ligament-tensioning device (1) with a predetermined force,
- pushing the aligning jig (48) for the dorsal femur cut into a cylindrical guide (55) of the drilling
- 20 jig (53),
- displacing the aligning jig (48) up against the distal femur surface (50),
- adjusting the lower leg until the aligning jig (48) rests evenly against the distal femur surface (50),
- 25 - drilling two holes (56) in the distal femur surface (50),
- removing the ligament-tensioning device (1) from the knee joint gap (43),
- 30 - pushing the chosen oblique-cutting jig (57) into the two holes (56),
- resecting the ventral oblique cut up to the mark (42),

and

- resecting the dorsal oblique cut.